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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Sunil Kulkarni

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05/20/2004

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EXAMINER

SUNG, CHRISTINE

ART UNIT

PAPER NUMBER

2878

DATE MAILED: 05/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/905,418

Applicant(s)

KULKARNI ET AL.

Examiner

Christine Sung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 March 2004.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☒ Claim(s) 14, 15 and 20-22 is/are allowed.  
6) ☒ Claim(s) 1-13, 16-19 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 25 August 2003 and 13 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

***Response to Amendment***

1. The amendment filed on 3/2/2004 was accepted and entered.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding the claim, the steps of storing the image data format definition in a format definition file including a pointer to the format definition file was not specifically disclosed.

NOTE: Should the applicant argue that storing the image data in a format definition file is inherent to having the file, then the reference currently cited in this office action can be applied.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

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evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-8 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thiel (US Patent 4,887,211) in view of Rodriguez, et al. (US Pre Grant Publication 2002/0154146 A1).

Regarding claim 1, Thiel discloses an image processor comprising: a detector (Column 4, lines 35-39) that acquires event data; and image processor (element 28) that processes the even data to produce image data; an image data storage medium (element 28), which stores the image data. Further it is inherent that the apparatus includes an image data processor because the apparatus has the ability to format the image data for storage on the storage medium (column 5, lines 31-34). Thiel does not specifically disclose that the image data for storage on the storage medium is in an extensible and open data format. However it is well known in the art, as shown by Rodriguez et al. (see claim 4) to use an extensible markup format or xml format for images. It would have been obvious to use an extensible or open format with the invention as disclosed by Thiel so that the images taken from the camera could be manipulated and formatted for desired applications. The xml or open format is well known in the art as an open format that can be converted to various types of desired formats, which gives the user of the camera system added flexibility in determining how to process the given data and free range in choosing the preferred format.

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Regarding independent claim 17, Thiel discloses an image processor that uses a nuclear camera system comprising: a detector (column 4, lines 35-39), used to acquire event data; an image processor (element 28) to process the event data to produce image data; acquisition controller (element 34) to control the detector; and a control data storage medium (see claim 4 and 5), coupled to the controller which stores control data. Thiel does not specify the use of xml format, but does not specify the type of image format. It is well known in the art as shown in Rodriguez et al. (see claim 4), to use an xml format for images so that the images can be modified for different types of applications with different formatting requirements. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the xml format disclosed by Rodriguez with the invention disclosed by Thiel so that the data collected from Thiel's invention could be used in various formatting applications.

Regarding claim 2, Thiel discloses the limitations set forth in claims 1 and 10, but does not specify the type of image format. It is well known in the art, as shown in Rodriguez et al. (see claim 4), to use an xml format for images so that the images can be modified for different types of applications with different formatting requirements. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the xml format disclosed by Rodriguez with the invention disclosed by Thiel so that the data collected from Thiel's invention could be used in various formatting applications.

Regarding claim 3, the limitations set forth in claims 1 and 2 are disclosed above. Although the references do not explicitly state that the data format is self-descriptive, it is inherent in xml format that the data format is self-descriptive.

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Regarding claim 4, 5 and 6, the limitations set forth in claim 3 are disclosed in the abovementioned paragraphs. Further, the claims disclose various descriptions of being self-descriptive. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have included the disclosed various formats with the invention as disclosed by Thiel in view of Rodriguez.

Regarding claims 7 and 8, all of these claims disclose the use of a pointer to point to an address of a file stored on the camera system, or a URL address where the image data definition may be found. Although the references do not explicitly state pointing to any of the aforementioned files, it would have been obvious that the image file could point to any of the aforementioned files. Since the image file points to a file storing definition of the image data format it could also point to a file stored on the camera system or a URL address. It would only be a matter of design choice as to where the image data would be sent because where the pointer is directed depends upon where the data is intended to be used, i.e. if it is desired to be viewed on a web page, a pointer to a URL address would be appropriate.

Regarding claim 18, the limitations set forth in claim 17 are described in the abovementioned paragraphs. Further, it is obvious to one having ordinary skill in the art at the time the invention was made to couple a hard drive or some form of a storage medium with the invention disclosed by Thiel, so that the image information may be transferred or modified at a later time. It is well known in the art to have a storage medium to store images that have been processed.

Further, regarding claim 19, it is also obvious that if the image data files are stored, that the image data files are also accessible by user commands.

Further regarding claims 18 and 19, all of the functions disclosed in the aforementioned claims are inherent to a conventional computer processor.

7. Claims 10-13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thiel (US Patent 4,887,211) in view of Senn et al. and further in view of Rodriguez (US Pre Grant Publication 2002/0154146).

Regarding claim 10, Thiel discloses an image processor that uses a nuclear camera system comprising: a detector (column 4, lines 35-39), used to acquire event data; an image processor (element 28) to process the event data to produce image data; acquisition controller (element 34) to control the detector. Thiel does not specify a control data storage medium, coupled to the acquisition controller which stores control data in an xml format. Senn et al. discloses a processing device including a control data storage medium that stores control data in an open format (see paragraph 4, lines 29-41). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the control data storage medium disclosed by Senn with the invention disclosed by Thiel in order to be able to correlate the control data to the image data in a desired format. Although Thiel does not specifically disclose that the image data for storage on the storage medium is in an extensible and open data format, Rodriguez discloses the use of a xml format for images. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use an extensible or open format with the invention as disclosed by Thiel in view of Senn so that the images taken from the camera could be manipulated and formatted for desired applications. The xml or open format is well known in the art and would be obvious to use in this type of processing as it is desirable to have the ability to manipulate image data and/or event data using desired file types.

Regarding claim 11, Thiel discloses the limitations set forth in claims 1 and 10, but does not specify the type of image format. It is well known in the art, as shown in Rodriguez et al. (see claim 4), to use an xml format for images so that the images can be modified for different types of applications with different formatting requirements. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the xml format disclosed by Rodriguez with the invention disclosed by Thiel so that the data collected from Thiel's invention could be used in various formatting applications.

Regarding claim 12, Thiel discloses an image processor that uses a nuclear camera system comprising: a detector (column 4, lines 35-39), used to acquire event data; and image processor (element 28) to process the event data to produce image data; acquisition controller (element 34) to control the detector. Thiel does not specify a control data storage medium, coupled to the acquisition controller which store control data in a given format. Senn et al. discloses a processing device including a control data storage medium that store control data in an open forma (see paragraph 4, lines 29-41). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the control data storage medium disclosed by Senn et al. with the invention disclosed by Thiel in order to be able to correlate the control data to the image data in a desired format. Further, it is well known in the art to display the control data used at the time of the data accumulation, such as a collimator data, isotope data and energy window data. It is well known in the art in image collection applications to include control data, for example, when x-ray images are take, a tag including the control data is supplemented with the image to inform the used while acquiring the image data.



Regarding claim 13, the limitations set forth in claim 12 is described in the abovementioned paragraphs. Further “collimated.xml, and energywindowsets.xml” are all standard forms of the xml format.

Regarding claim 16, the limitation set forth in claim 13 is described in the abovementioned paragraphs. Further the “.dtd.” by xml definition are pointed to by the xml files.

### ***Response to Arguments***

8. Applicant's arguments filed March 3, 2004 have been fully considered but they are not persuasive.

9. The applicant's argument that a CT scanner is not analogous to a nuclear camera is not persuasive. The claims do not have any limitations that reflect detailed use of a nuclear camera, but rather the claims reflect an invention that is directed to the image data and the processing and manipulation of that data. Therefore, the previous rejection of the claims still stands.

### ***Allowable Subject Matter***

1. Claims 14-15 and 20-22 are allowed.
2. The following is a statement of reasons for the indication of allowable subject matter:  
The allowable subject matter was indicated in the prior office action.

### ***Conclusion***

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine Sung whose telephone number is 571-272-2448. The examiner can normally be reached on Monday- Thursday 7-5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Christine Sung  
Examiner  
Art Unit 2878

CS

  
**DAVID PORTA**  
**SUPERVISORY PATENT EXAMINER**  
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